

## SUBCHAPTER K—NIST EXTRAMURAL PROGRAMS

### PART 290—REGIONAL CENTERS FOR THE TRANSFER OF MANU- FACTURING TECHNOLOGY

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AUTHORITY: 15 U.S.C. 278k.

SOURCE: 55 FR 38275, Sept. 17, 1990, unless  
otherwise noted.

#### § 290.1 Purpose.

This rule provides policy for a program to establish Regional Centers for the Transfer of Manufacturing Technology as well as the prescribed policies and procedures to insure the fair, equitable and uniform treatment of proposals for assistance. In addition, the rule provides general guidelines for the management of the program by the National Institute of Standards and Technology, as well as criteria for the evaluation of the Centers, throughout the lifecycle of financial assistance to the Centers by the National Institute of Standards and Technology.

#### § 290.2 Definitions.

(a) The phrase *advanced manufacturing technology* refers to new technologies which have recently been developed, or are currently under development, for use in product or part design, fabrication, assembly, quality control, or improving production efficiency.

(b) The term *Center* or *Regional Center* means a NIST-established Regional Center for the Transfer of Manufacturing Technology described under these procedures.

(c) The term *operating award* means a cooperative agreement which provides funding and technical assistance to a Center for purposes set forth in § 290.3 of these procedures.

(d) The term *Director* means the Director of the National Institute of Standards and Technology.

(e) The term *NIST* means the National Institute of Standards and Technology, U.S. Department of Commerce.

(f) The term *Program* or *Centers Program* means the NIST program for establishment of, support for, and cooperative interaction with Regional Centers for the Transfer of Manufacturing Technology.

(g) The term *qualified proposal* means a proposal submitted by a nonprofit organization which meets the basic requirements set forth in § 290.5 of these procedures.

(h) The term *Secretary* means the Secretary of Commerce.

(i) The term *target firm* means those firms best able to absorb advanced manufacturing technologies and techniques, especially those developed at NIST, and which are already well prepared in an operational, management and financial sense to improve the levels of technology they employ.

#### § 290.3 Program description.

(a) The Secretary, acting through the Director, shall provide technical and financial assistance for the creation and support of Regional Centers for the Transfer of Manufacturing Technology. Each Center shall be affiliated with a U.S.-based nonprofit institution or organization which has submitted a qualified proposal for a Center Operating Award under these procedures. Support may be provided for a period not to exceed six years. The Centers work with industry, universities, nonprofit economic development organizations and state governments to transfer advanced manufacturing technologies, processes, and methods as defined in § 290.2 to small and medium sized firms. These technology transfer efforts focus on the continuous and incremental improvement of the target firms. The advanced manufacturing technology which is the focus of the Centers is the subject of research in NIST's Automated Manufacturing Research Facility (AMRF). The core of AMRF research has principally been

applied in discrete part manufacturing, including electronics, composites, plastics, and metal parts fabrication and assembly. Centers will be afforded the opportunity for interaction with the AMRF and will be given access to research projects and results to strengthen their technology transfer. Where elements of a solution are available from an existing source, they should be employed. Where private-sector consultants who can meet the needs of a small- or medium-sized manufacturer are available, they should handle the task. Each Center should bring to bear the technology expertise described in §290.3(d) to assist small- and medium-sized manufacturing firms in adopting advanced manufacturing technology.

(b) *Program objective.* The objective of the NIST Manufacturing Technology Centers is to enhance productivity and technological performance in United States manufacturing. This will be accomplished through:

(1) The transfer of manufacturing technology and techniques developed at NIST to Centers and, through them, to manufacturing companies throughout the United States;

(2) The participation of individuals from industry, universities, State governments, other Federal agencies, and, when appropriate, NIST in cooperative technology transfer activities;

(3) Efforts to make new manufacturing technology and processes usable by United States-based small- and medium-sized companies;

(4) The active dissemination of scientific, engineering, technical, and management information about manufacturing to industrial firms, including small- and medium-sized manufacturing companies; and

(5) The utilization, when appropriate, of the expertise and capability that exists in Federal laboratories other than NIST.

(c) *Center activities.* The activities of the Centers shall include:

(1) The establishment of automated manufacturing systems and other advanced production technologies based on research by NIST and other Federal laboratories for the purpose of demonstrations and technology transfer;

(2) The active transfer and dissemination of research findings and Center expertise to a wide range of companies and enterprises, particularly small- and medium-sized manufacturers; and

(3) Loans, on a selective, short-term basis, of items of advanced manufacturing equipment to small manufacturing firms with less than 100 employees.

(d) *Center organization and operation.* Each Center will be organized to transfer advanced manufacturing technology to small and medium sized manufacturers located in its service region. Regional Centers will be established and operated via cooperative agreements between NIST and the award-receiving organizations. Individual awards shall be decided on the basis of merit review, geographical diversity, and the availability of funding.

(e) *Leverage.* The Centers program must concentrate on approaches which can be applied to other companies, in other regions, or by other organizations. The lessons learned in assisting a particular target firm should be documented in order to facilitate the use of those lessons by other target firms. A Center should build on unique solutions developed for a single company to develop techniques of broad applicability. It should seek wide implementation with well-developed mechanisms for distribution of results. Leverage is the principle of developing less resource-intensive methods of delivering technologies (as when a Center staff person has the same impact on ten firms as was formerly obtained with the resources used for one, or when a project once done by the Center can be carried out for dozens of companies by the private sector or a state or local organization.) Leverage does not imply a larger non-federal funding match (that is, greater expenditure of non-federal dollars for each federal dollar) but rather a greater impact per dollar.

(f) *Regional impact.* A new Center should not begin by spreading its resources too thinly over too large a geographic area. It should concentrate first on establishing its structure, operating style, and client base within a manageable service area.